Intel® RAID Options

**Intel® RSTe**
Intel® RSTe (also known as Intel® Rapid Storage Technology-Enterprise) is an embedded software RAID solution based on the Intel Chipset RAID Stack for on-server board SAS and SATA ports. It provides pass-through drive support as well as host based RAID 0/1/10 support and RAID 5 support for the SATA ports.

**Intel® Integrated RAID Modules**
Intel® Integrated RAID Modules connects to the on-board SAS Module Connector or a module enabled PCI-E slot. This is a cost-effective RAID solution providing more system design flexibility.

**RAID Adapters**
Standard SAS or RAID HBA available from Intel® or 3rd Party suppliers. See Intel® Server Configurator Tool (http://serverconfigurator.intel.com) for the most up-to-date adapter support list for your system.

**Intel® ESRT2 (LSI*)**
Intel® ESRT2 (also known as Intel® Embedded Server RAID Technology 2) is an embedded software RAID solution based on the LSI MegaRAID* Stack for on-server board SAS and SATA ports. It supports RAID 0/1/10 and optional RAID 5 with the proper Intel® RAID C600 upgrade keys (must be purchased separately).

**Intel® RAID C600 Upgrade Keys**
Embedded RAID functions for both On-board SATA/SAS Capable Controller and AHCI Capable SATA Controller can be upgraded by installing one of the Intel® RAID C600 Upgrade keys listed below.

<table>
<thead>
<tr>
<th>Item</th>
<th>Product Code</th>
<th>Color</th>
<th>On-Board SATA/SAS Capable Controller</th>
<th>On-Board AHCI Capable SATA Controller</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RKSATA4R5</td>
<td>Black</td>
<td>Same as item 1 but add RAID 5 support in Intel® ESRT2 (LSI*) mode</td>
<td>Same as item 1 but add RAID 5 support in Intel® ESRT2 (LSI*) mode</td>
</tr>
<tr>
<td>2</td>
<td>RKSATA8</td>
<td>Blue</td>
<td>Same as item 1 but activate all 8 ports</td>
<td>Same as item 1</td>
</tr>
<tr>
<td>3</td>
<td>RKSATA8R5</td>
<td>White</td>
<td>Same as item 3 but add RAID 5 support in Intel® ESRT2 (LSI*) mode</td>
<td>Same as item 1 but add RAID 5 support in Intel® ESRT2 (LSI*) mode</td>
</tr>
<tr>
<td>4</td>
<td>RKSAS4</td>
<td>Green</td>
<td>Intel® RSTe 4 ports SAS R0,1,10 or Intel® ESRT2 (LSI*) 4 ports SAS R0,1,10</td>
<td>Same as item 1</td>
</tr>
<tr>
<td>5</td>
<td>RKSAS4R5</td>
<td>Yellow</td>
<td>Same as item 5 but add RAID 5 support in Intel® ESRT2 (LSI*) mode</td>
<td>Same as item 1 but add RAID 5 support in Intel® ESRT2 (LSI*) mode</td>
</tr>
<tr>
<td>6</td>
<td>RKSAS8</td>
<td>Orange</td>
<td>Same as item 5 but activate all 8 ports</td>
<td>Same as item 1</td>
</tr>
<tr>
<td>7</td>
<td>RKSAS8R5</td>
<td>Purple</td>
<td>Same as item 7 but add RAID 5 support in Intel® ESRT2 (LSI*) mode</td>
<td>Same as item 1 but add RAID 5 support in Intel® ESRT2 (LSI*) mode</td>
</tr>
</tbody>
</table>

Note: Some of above Intel® RAID C600 Upgrade Keys may be not suitable for your Intel® platforms. See Intel® Server Configurator Tool (http://serverconfigurator.intel.com) for the key support list for your system.
Step 1: Choose a RAID Option

On-board AHCI Capable SATA Controller (SATA Ports)

- Supported RAID option:
  1. Intel® RSTe
  2. Intel® ESRT2 (LSI*)

On-Server board SAS/SATA Controller (SAS Ports)

- Supported RAID option:
  1. Intel® RSTe
  2. Intel® ESRT2 (LSI*)

Intel® Integrated RAID Module

- See Intel® Server Configurator Tool for supported modules for your system.

RAID Adapters

- See Intel® Server Configurator Tool for supported RAID Adapters for your system.

Intel® RAID C600 Upgrade Keys

Refer to the key description table on previous page to populate a proper key on your system.

Intel® RAID Options

- Entry Adapters = R0,1,1E
- Mainstream Adapters = R0,1,10,5,50,6,60
- Optional Premium Feature Keys
  - AXRPFKSSD = SSD Cache
  - AXRPFKODE = Disk Encryption
  - AXRPFKSNSH = Snapshot
  - For Details See Intel® Server Configurator Tool.

Intel® RAID Quick Reference Guide

Step 2: Choose proper hardware

Intel® RAID C600 Upgrade Keys

Refer to the key description table on previous page to populate a proper key on your system.

Intel® RAID Controllers

- Entry Adapters = R0,1,1E
- Mainstream Adapters = R0,1,10,5,50,6,60
- Optional Premium Feature Keys
  - AXRPFKSSD = SSD Cache
  - AXRPFKODE = Disk Encryption
  - AXRPFKSNSH = Snapshot
  - For Details See Intel® Server Configurator Tool.

Step 3: Enable RAID Option

1. During system post, press F2 to enter System BIOS Setup
2. Under Advance tab, select Mass Storage Controller Configuration and press Enter
3. Select Intel(R) RSTe or Intel(R) ESRT2 (LSI*) for AHCI Capable SATA Controller

Intel® RAID Options


Intel® ESRT2 (LSI*):


These guides and other supporting documents are located on the web at: http://www.intel.com

Step 4: Configure RAID

Intel® RSTe:


Intel® ESRT2 (LSI*):


Follow the Quick Start User’s Guide that shipped with the module to install the Intel® Integrated RAID Module in the server system.

Follow the Quick Start User’s Guide (shipped with the adapter) to install the Intel® RAID controller in the server system.

Follow the Quick Start User’s Guide for RAID configuration and maintenance assistance.

Follow the Quick Start User’s Guide for RAID configuration and maintenance assistance.